

REMARKS

ON

PARALYSIS, AND OTHER DISORDERS OF MOTION
AND SENSATION, DEPENDENT ON IDEA.*

By J. RUSSELL REYNOLDS, M.D., F.R.S.,

Professor of Medicine in University College; Physician to University College Hospital; etc.

THE object of this paper is to show—1. That some of the most serious disorders of the nervous system, such as paralysis, spasm, pain, and otherwise altered sensations, may depend upon a morbid condition of emotion, of idea and emotion, or of idea alone; 2. That such symptoms often exist for a long time, appearing as complicated diseases of the brain or spinal cord; 3. That they resist many different kinds of treatment, being alike unmoved by sedatives and irritants, by attention or neglect, but that they disappear entirely upon the removal of the erroneous idea; 4. That they occur independently of anything that could be called either insanity of mind, hysteria, hypochondriasis, or malingering; 5. That they are often, but not constantly, associated with some bodily weakness or general debility; 6. That they sometimes associate themselves with distinct and definite diseases of the nervous centres, so that it becomes very important to know how much of a given case is due to organic lesion, and how much to morbid ideation; 7. That it is possible to make a diagnosis with regard to them in many instances; and, 8. That the principles upon which their treatment should be conducted are simple, and their application marvellously successful.

1. Everyone is familiar with some of what may be termed the "acute" effects of idea and emotion. It is well known that a man may be rendered instantaneously powerless or paralysed, rigid, stupefied, statuesque or unconscious by the sudden communication of startling intelligence. It is of daily occurrence, that pain is taken away by sudden fear; that some sensorial impressions are lost in the state of mental tension that accompanies intellectual effort; *e.g.*, the child loses its toothache when it sits down in the dentist's chair; and the student does not hear the tick or the striking of his timepiece when he is busy at his work. It is familiar enough that the idea of pain constitutes much of what we denominate as pain, and that sometimes it makes up the whole of it, as it did, *e.g.*, in the well known case of the butcher, who was agonised almost past endurance by the fact that a flesh-hook had caught itself, not in his skin, but only in his sleeve. Facts of the kind I have alluded to are at the very basis of our pathological interpretation of cases, but, at the same time, the "chronic" effects of idea and emotion are often completely overlooked when they take the form of muscular and sensory disturbance. We recognise them, at once, when they shew themselves in altered notions, sentiments, or feelings, but we often fail to perceive their true nature when they appear as paralysis or pain. The following case will illustrate this kind of disturbance in its simplest form. A young lady, who has seen better days, is admitted into hospital, paraplegic. She has become so gradually, and has lost flesh generally, and to a considerable extent. For two or three months, she has been quite unable to stand, even for a moment; now she lies in bed almost entirely. Her expression is anxious, but with some hopefulness. She thinks that, having come to the hospital—a great mental struggle for some who have, in former days, enjoyed every luxury at home—she may get better. These points are to be noticed in her case: that the paralysis is almost complete; the patient can just move the toes, or just raise either heel separately from the bed, while lying on her back; but there is no want of control over the sphincters, no local change of nutrition (*i.e.*, nutrition of the legs as compared with the arms); the cutaneous sensibility is perfect; reflex movements are difficult to arouse; the electric contractility and sensibility are perfect; there is no spasm, either tonic or clonic; there is no pain, either spontaneous or producible by movement of limb or pressure on the spinal column. There is no evidence of tubercular or other cachexia; there has been no blow; there has been no hysteria. It would be difficult to place this case among any of the well known categories of spinal disease, and I regarded it as ideal paralysis; her previous and subsequent history demonstrating the correctness of this view. The young lady's father, her

only relation, was, a year and a half ago, reduced from affluence to poverty by one of those commercial accidents which produce effects of "shock" as severe as, and often more permanent than, those of railway collision. He bore it bravely, and so did she; he, in his advancing years, went back into the work that he had long since renounced; she, in her youth, took upon herself duties and responsibilities that were, to her, entirely new. For a little time, all was well, and they did not grieve over their altered fortunes; but, now, the father became paralytic, suddenly, and the daughter nursed him tenderly, and so assiduously, that they soon came to be in the reality of want. The father was helpless, but not so ill that the daughter could not leave him; and so she worked hard as a daily governess, often walked where she used to ride, to save expense, and walked quickly to gain time and be the more at home. Thus, she lived and worked on for many dreary weeks, with paralysis constantly upon her mind, her brain overdone with thought and feeling, her limbs wearied with walking, and her heart tired out with the effort to look bright, and be so. Her limbs often ached, and a horror took hold of her, as the idea again and again crossed her mind, that she might become paralysed like her father; she tried to banish it, but it haunted her still, and, gradually, she had to give up walking, then to stop in the house, then in the room, and then in her bed. Her legs "became heavier day by day"; and she at last reached the state in which I found her when she was carried to the hospital.

She was told, and the nurses, and those about her, were all told, most confidently, that she would soon walk quite well; she was given some mild tonic medicine; faradisation was applied to the muscles of the legs: be it remembered, that the electric contractility was perfect, and that this was done merely to produce a mental impression. The back and limbs were well rubbed, and the patient was taken between two nurses—who acted as crutches—and made to walk up and down the ward for five minutes every four hours. On the day after treatment was commenced, she could stand with a little support; at the end of four or five days, she could walk fairly well; and, at the end of a fortnight, she was as strong and capable of exertion as she had ever been in her life.

2. The chronicity and apparent severity of the malady I am describing, are illustrated by the two following cases; chronicity by the one, severity by the other. A girl, aged fifteen, is admitted into hospital because she has been "paralysed" for two years, since an attack of typhoid fever. The patient is thin, but not unhealthy looking; her manner is bright, even merry; she busies herself with her hands, and is clever in their use; she appears to be possessed of something more than average intelligence and energy; there is nothing "hysterical" in her history. She is partially paraplegic, however, and has been so for two years. She can not stand for one moment; her legs, when she is placed upon her feet, "double up" under her "like wet brown paper," and she "drops upon her knees". When lying on her back, it is found that she can draw her knees upwards, both briskly and strongly; that she can raise her heels from off the bed, when the legs are extended; and that she can throw the foot downwards with vigour. She moves along the floor, briskly, on her hands and knees, dragging the legs after her, with the feet turned downwards, and the toes inwards. Sometimes she entangles her feet, or gets one of them under the other in such manner that there is some difficulty in starting again; but, habitually, her movements are prompt and energetic. Below each knee, and on the dorsum of each foot, there are patches of hardened cuticle, resembling somewhat those usually present on the soles of the feet: these, of late, have become sore round their edges, and, in several places, are bleeding. The skin on the soles of the feet is thin and soft; the gluteal muscles are flaccid. Sensibility and electric contractility are perfect everywhere. The treatment adopted in this case was the same as that used in the preceding one; and, within a week, the patient could walk well, and without any assistance.

The third case that I propose to read to you, illustrates the apparent severity of symptoms. A boy, nine years of age, is admitted into hospital with inability to walk, or even stand; with paroxysms of violent pain in the body and limbs when the attempt is made to adopt the erect posture; with difficulty of swallowing, and spasmodic movements of the eyelids, coming on in paroxysms, and followed by contortions of the body. The attempt to swallow brings on spasmodic movements in the face and throat, followed by general convulsions of the limbs and trunk, and loud crying, as if in pain. The boy is pale, but not wasted; his aspect is intelligent, and he answers questions sensibly and without any difficulty of articulation. The moment that he is put upon his feet, the legs "double" under him, and he screams with pain, various spasmodic movements following the attempt. The following facts, however, are to be noted. There is no irregularity of the spine, no tenderness of the spinous processes; and, as the boy lies in bed he can execute every variety of movement of the trunk and of both the lower extremities;

* Read in the Medical Section at the Annual Meeting of the British Medical Association in Leeds, July 1869.

the vertical position does not cause pain, for I can hold him under the armpits and let his legs hang down, or I may swing his legs backwards and forwards, while thus holding him, without causing any inconvenience, except to myself. It does not hurt him to have the soles of his feet knocked sharply upwards against the trunk, nor, when he is lying in bed, does it give him any pain when I take hold of his heels and pull him downwards, or even raise him upwards from off the bed. There is no tenderness of the skin, nor of the muscles; no loss of electric irritability, no undue pain when the muscles are made to contract forcibly, by faradisation with well wetted sponges. But yet, when the boy, supported under either axilla, is made to touch his feet to the ground, he howls with apparent pain. It is noticeable, however, that the expression of countenance is one rather of alarm or fear than of actual suffering.

Of the history of this case, I was furnished with notes by my friend Dr. Ransom, of Nottingham, and the main facts of that history are the following. The father was "a nervous man"; the mother delicate. Sixteen weeks ago, the boy had influenza and sore throat; diphtheria was carefully inquired into, but believed not to have existed. A fortnight later, the patient had severe pain in the mid-back, thought to be from "liver", and was treated, not by Dr. Ransom, with mercurials and blisters, for sixteen or twenty days. The pain was paroxysmal, and there was no fever. He was allowed to get out of bed at the end of the third week, but walking was painful, and, indeed, impossible, from pain in the legs, groins, and sides of the trunk. He was seen by Dr. Ransom, six weeks ago, and then found unable to stand or walk, the inability being ascribed by Dr. Ransom to pain rather than loss of power. The pains came on in paroxysms which made him call out violently for hours during the day, but he slept well at night, and during the intervals of pain was cheerful and playful. Morphine, belladonna, quinine, failed to give relief. Between three and four weeks ago, rigid spasms came on in the flexors of the feet and hands; but these ceased during sleep. Bromide of potassium was given, and a blister was applied to the spine, and, by degrees, the spasms and pain were somewhat reduced in severity. The hypodermic injection of morphia gave no relief. Spasms of the eyelids occurred a fortnight ago, followed by pain, in which, often, the body was contorted, and knocked about dangerously. The urine was alkaline and phosphatic at first, but less so of late. The difficulty of swallowing commenced about a week before admission into hospital. Now, the attempt to open the mouth brings on spasms, and the symptoms are those already described. I was convinced that, whatever may have been the pathology of the case at its onset, its present symptoms were due to mental and emotional disturbance. I regarded the pain, the apparent paralysis, and the spasmodic movements as of imaginary origin, and treated the case accordingly. It was obvious, from what I have stated, that neither position of body, nor action of muscles, nor pressure on the vertebral bones was in itself painful; and it was obvious that there was no true paralysis. There was no reasonable explanation of the pain which walking, or rather the attempt at walking, caused; and the expression of countenance was unlike that of pain. Although, therefore, the boy asserted that the pain was very bad, and howled vociferously when put upon his feet, I believe that the pain was of the same kind as that of the butcher, when the flesh-hook had caught in his sleeve. I do not mean, for one moment, to say that there was no pain. I believe there was, and that in both instances it was severe, but it was of similar origin in the two instances.

The prescription for him was, that minced meat and vegetables should be placed beside him every four hours, and that no attempt should be made to coax him to take the food, but that, at the end of an hour, if he had not eaten any, the plates should be removed; he was told that he must be walked up and down the ward, between two nurses, every four hours, and that he must try not to mind the pain, for it would soon be better, and the walking would do him good; and he was further enjoined to "try and be a man", and make as little noise as possible by howling. No medicine was prescribed for him except a mere placebo; his legs and back were to be rubbed well twice daily.

For the first twenty-four hours, he took no food, but, on the end of the second day, said he was "so hungry", and on "the sister" bringing back his plate of meat, he ate it all without difficulty or spasm. At first, he howled loudly when made to walk, but this soon ceased altogether; and, in the course of a few days, he walked well, made no complaint of pain, and, before he had been in the hospital for a fortnight, he converted himself into an amateur messenger's boy for the other patients, running often up and down stairs on errands for the patients and the nurses.

Now, in this instance, I believe the boy at first was really ill; that he had genuine pain; that it hurt him to walk; and that the pain brought on spasmodic movements; but I also believe that, at the time when I saw him, all his symptoms were the result of idea, or imagina-

tion only; the former impressions being perpetuated, perhaps after the manner that certain impressions may be retained by the organs of special sense after the removal of their first-producing causes. We know that individuals differ in the readiness with which spectra, of form, and of complementary colour, may be produced, and in the length of time during which they may be retained by the eye. It sometimes happens that the individual believes in the real existence of these spectra, but in the very large majority, of even the most sensitive individuals, they are held to be hallucinations of the senses, and that which enables this conclusion to be immediately arrived at is the possibility of confronting the romance of one sense with the realism of another. But in the matter of pain, or of a feeling of powerlessness, there is no such correction to be obtained; the physician may find facts enough to guide his mind to an interpretation of the phenomena, but the patient cannot separate the unreal from the real, and is often aided in exaggerating the importance of the former by the kind but ill-advised solicitude of anxious relatives and learned friends.

3. The resistance offered by these maladies to ordinary modes of treatment has been already illustrated in some degree. Those forms of medication which may be employed for the relief of a neuralgia, of hysteria, of spasm, and of paralysis, when dependent upon organic disease, generally fail entirely here. It has often occurred to me to see cases which have gone the round of many theories with their therapeutic applications. The notion of "some inflammatory change" has led to the use of mercurials, iodides, counter-irritants, and depletives; the diagnosis of neuralgia has been followed by heroic doses of quinine or arsenic, by hypodermic injections of morphia, of atropia, and the like; the idea of hysteria has been met by the whole paraphernalia of antihysterical remedies, by assafoetida, valerian, and musk, by blisters, by "actual" and other cauteries; by stimulants and sedatives, by coaxing, by scolding, and the like; but the malady has resisted all such efforts; and has resisted them for months, and indeed for years; and yet the patients have been speedily cured by measures similar to those which I have described, viz., such as at once practically counteract the morbid notion, and compel the patient to use the voluntary power, which remains, but which has become practically inoperative under ordinary circumstances.

4. Cases of the kind which I have described are by no means necessarily associated with any of those recognised forms of disease to which the technical terms of insanity, hypochondriasis, or hysteria, can be fairly applied. They may be combined with these affections, but they may and do exist in entire independence of their presence. The mind may be healthy; there may be nothing whatever of the hypochondriacal temperament; nothing that even resembles genuine hysteria; *i.e.* there may be perfect freedom from all the ordinary characteristics of insanity; there may be no undue apprehensiveness, but, on the contrary, a cheerful tone of feeling, and a hopefulness that is quite marvellous amidst so much helplessness and dependence; and there may also be an entire absence of anything like hysterical spasm, or general habit of either mind or body. At the same time it is most obvious that such patients are often as far removed as it is possible to be from anything like the wish or the habit of deception. They believe, and they believe utterly, in the reality of their symptoms; they are anxious to be cured, and they readily follow out the processes of treatment, sometimes wearisome and often painful, that are suggested for their relief.

5. The association of this form of disease with local bodily weakness or with general debility is very commonly observed, and such alliance is of much importance in a comprehension of its pathology, and in the direction of its cure. Already I have shown that this was to be observed in three cases, in the one there was the gradual exhaustion of over-anxiety and over-exertion, both of body and of mind; in the second there was the feebleness induced by typhoid fever; in the third there was the weakness that follows influenza and sore throat; in two others I have observed the symptoms to follow upon rapid child-bearing. In another, a very marked case, the symptoms followed upon chronic diarrhoea; in several they have been preceded by sexual excess, or masturbation; and, in very many, upon the shock of and subsequent thought about a railway accident. It is probable that a general impairment of nutrition has very much to do with these results, but there is also usually some accidental determination of thought to one set of limbs or symptoms. This is often of the kind that I have mentioned, and also of another kind, viz., the solitary poring over some wretched book that deals in descriptions of all the horrible results of youthful indiscretion.

It seems to me that many of the severer forms of nervous disturbance that follow the shock of railway accidents, are of this nature. On the one side, there are cases of distinct nervous injury, on the other, cases of malingering and sham; but between these two extremes there are very many of morbid ideation. An honest man, and a bold one, may

be shaken physically and frightened morally; he is told to rest; he has nothing to do; all his kind friends who call on him tell him of the Messrs. So-and-so, all of whom met with "just such an accident," and who became "quite paralysed after a time." His doctor asks him if he feels this and that; his lawyer shakes his head mysteriously, and the last straw that often breaks his back is either the very grave face and sympathetic tone of the "Company's doctor," that convinces him that something is very seriously wrong, or, on the other hand, the extreme cheerfulness of that functionary, which is, to the patient's mind, distinct evidence that his hopefulness is all put on. The man becomes really ill, but the region of illness is idea.

6. The degree to which the form of malady enters into the complicated histories of chronic cases of nervous disease, is one of its most interesting features; because it often happens, on the one hand, that such symptoms as it can produce may be supposed to be the result of real organic lesion, and so place the case among the category of incurable diseases, and, on the other, that a recognition of their true nature may lead to their speedy removal, and an amount of encouragement that shall be very useful in the alleviation of more grave derangement. A few facts of an actual case will illustrate this point. A married lady, the mother of four children, and the victim of several mishaps, suffered much from hæmorrhoids, fissure of the anus, great debility, and convulsive seizures of epileptoid character. She was intensely anæmic, had much headache, attacks of occasional delirium, sometimes hysterical in form, but sometimes passing beyond that type. There was much to distress her in surrounding circumstances, impaired fortune, and a necessity for exertion beyond her powers. She gradually became paraplegic, lost control over the sphincters, and was confined to bed. Her nights alternated between fainting and delirium, the passage from the one to the other being marked by some convulsive seizures, of what may be termed hysterico-epileptic character. This state of affairs continued for many months; the helplessness of the patient, and the distress of her husband, increasing week by week. Upon examination, I found inability to move the lower limbs to any extent, occasional involuntary micturition, and escape of feces; but the nutrition of these limbs was not specially affected, there was no alteration of sensibility, no bed-sore, and no tenderness of spine on deep pressure; but there was a great sorrow on account of her helplessness, and an admission that she had for a long time "feared that she might become paralysed." This patient was quite well in a fortnight, and the treatment that was used was that which I have already described. The first night that she was taken to the hospital, the evacuations occurred in bed; but she was told by the nurse that "such things were not allowed," and they never occurred again.

The subsequent history of the case was one of the kind that might be supposed; some of the nervous symptoms remained in a diminished degree, but the general health became fairly good, and the paraplegia disappeared altogether.

7. The diagnosis of the condition which I have endeavoured to describe is to be framed—1. Upon a consideration of the mode of onset of the symptoms, and especially upon the discovery of an idea which should take possession of the mind, and lead to its own fulfilment; 2. Upon an estimate of the symptoms actually present, and, particularly, upon the discovery of phenomena which can not be explained by what we know of the history of organic lesion. Here I would draw attention to such anomalies as these:—*a.* That a patient cannot raise the heel off the bed, or draw it upwards towards the body, and yet that he or she can sit up in bed, or lie down voluntarily and slowly without assistance, or can turn from side to side without aid; *b.* That this apparently absolute paralysis co-exists with perfect sensibility of skin, electro-muscular sensibility, and contractility; with unimpaired nutrition of the muscles and the skin; and with no sign of disease in the spinal bones; or, *c.* That there is absolute inability to maintain the erect position, although there is the possibility of moving the limbs in any direction, and this, without failure of irritability, or nutrition, or sensation. 3. Upon the observation of the effects of treatment; *a.* The absence of beneficial result from ordinary medication; and, *b.* The almost immediate advantage to be seen on the adoption of methods which are directed to the alteration of idea.

8. The treatment is that which I have already described, viz.:—*a.* A real, earnest dealing with the case, as one of grave character, although not of the kind supposed; *b.* A confident expression of hope, if certain plans are followed out; and the steady conveyance of this hope habitually to the patient, not only by the physician, but by those in constant contact with the patient. This is, I believe, of paramount importance; and hence it is that much more can be done in hospital than in private practice. Still, sometimes, it is possible to place a patient away from home, with a well-instructed nurse, and so gain the main points of hospital treatment. This it is desirable to do when-

ever it is possible; but sometimes much may be gained by sending an accomplished nurse to the house to take the patient well into her own hands, and out of those of kind but over-anxious friends. *c.* Making the patient attempt to walk at once, and at stated intervals, with support on each side, the amount of support to be gradually diminished day by day. *d.* The employment of faradisation to the muscles, partly as a moral and mental agent, partly as a physical occasion of muscular contraction. It is important to discover the muscles which are the most flaccid and the least susceptible of voluntary work, and to direct especial attention to their treatment. *e.* Friction and passive movements of the limbs. *f.* Such regiminal, dietetic, and medicinal means as may be required by the special condition of the patient.

By such means as these, and by their careful variation and manipulation, I believe and know that many cases of apparently grave disorder of the nervous centres, may be removed entirely; and that, in other instances, when the ideal affection is grafted upon organic lesion, much may be done to remove the former, and afford so much of the stimulus of hope that the cure of yet graver symptoms is brought within the range, not only of possibility, but of probability, and of actual fact.

ON THE REGISTRATION OF DISEASES.*

By G. H. PHILIPSON, M.A., M.D. Cantab., M.R.C.P. Lond.,
Physician to the Newcastle-upon-Tyne Infirmary, etc.

THE study of the diseases which prevail, or are common, forms a portion of our daily occupation. By the interchange of ideas consequent thereon, many important facts and phenomena respecting their natural history and pathology become imparted from one to another, and are thus not only preserved, but, in addition, may be suggestive of new views in other minds. By the mere mention that a contagious and epidemic disease is raging in a district, a warning is given to others in distant parts, who at once have their attention riveted to the probability of their own district becoming similarly affected, make timely preparation for the approach of the enemy, whose course, happily, may be intercepted, and the magnitude of the calamity lessened. This is especially the case with what may be termed the fresh epidemic diseases, or those which are new in a district, as the occurrences of diphtheria and cerebro-spinal meningitis within the last few years. If we were not, in this way, made acquainted with the peculiarities or characteristic symptoms of such diseases, how could they, with any certainty, be recognised by those who had been precluded the opportunity of observing them? Again, the more severe epidemic diseases are frequently preceded by a similar but milder disease, the resemblance being in the similitude of the symptoms, the mild disease giving a timely warning, or occupying the position of herald to the graver disease. These forerunners, then, are to be regarded, and the incidents which are happening to others heeded; for by such means we may, peradventure, prevent, mitigate, or arrest the prevalence of an epidemic outbreak.

If, by any possibility, we mitigate the outbreak of an epidemic disease, we are rendering service to the public by screening them not only from that disease, but from others which have been observed to follow closely in its footsteps, and which are known to be of a much more fatal character. When it is considered how exceedingly rare it is for even a single individual, and certainly for a collection of people, to pass through an outbreak of a contagious or epidemic disease, without being taken possession of thereby, unless they have been rendered impenetrable to the influencing effects by a former attack of the same disease, all our efforts should be roused to the investigation of these important subjects. For how often does it happen in those who have recovered from an attack of one of the epidemic diseases, that the constitution is so weakened that the former state of vigour is never re-attained; or, if the health appear re-established, the ground is all prepared for the more ready occupation by some other disease; or, after a varying time, the strength gradually declines, finally yielding, without any organic disease being discoverable.

The study of epidemic diseases, therefore, calls for our best energies, but is yet quite in its infancy. The labourers may be said to have only passed the threshold. This is not from the number of those thus employed having been small, or from the workers having been idle or unable to solve the many difficult problems. A large portion of those who have selected this field for their labour have been from the foremost ranks of men of science, and have shown an affection for their work, which could with difficulty be excelled; even some, by their devotion, have sacrificed their very lives. In a measure the scanty results

* Read in the Public Medicine Section at the Annual Meeting of the British Medical Association in Leeds, July 1869.